MANUFACTURE OF CARBON/CARBON COMPOSITES BY HOT PRESSING

ABSTRACT OF THE DISCLOSURE

[00065] A mixture of carbon-containing fibers, such as mesophase or isotropic pitch fibers, and a suitable matrix material, such as a milled pitch, is compressed while resistively heating the mixture to form a carbonized composite material having a density of about 1.5 g/cm^3, or higher. The composite material is formed in under ten minutes. This is a significantly shorter time than for conventional processes, which typically take several days and achieve a lower density material. Consequently, carbon/carbon composite materials having final densities of about 1.6-1.8 g/cm^3, or higher are readily achieved with one or two infiltration cycles using a pitch or other carbonaceous material to fill voids in the composite and rebaking.